

R E S T R I C T E D

HEADQUARTERS  
THEATER SERVICE FORCES  
EUROPEAN THEATER  
Office of the Theater Chief Surgeon  
(Main), APO 757

Ch. Surg. **ARMY MEDICAL**

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CIRCULAR LETTER NO. 86

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INFLUENZA

1. The possibility of an epidemic of influenza this winter must be seriously considered. The first factor contributing to this possibility is the present prevalence of Influenza B in small outbreaks in many parts of the world since the middle of April 1945. A second factor is the cyclic fluctuation in respiratory disease rates which shows a peak every four years with one due this year. Other factors particularly applicable in this theater are the continuing mass movements of expellees, inadequate living conditions, and the poor nutritional status of the civilian population. This circular has been prepared and distributed to ensure early recognition, reporting, certain laboratory studies, effective treatment, particularly of complications, and adequate control measures in outbreaks of influenza and influenza-like conditions. Reference is made to par 6, TB Med 47, 28 May 1944, subject "Influenza", quoted in part in par 3 below and Office of the Chief Surgeon, Circular Letter No 40, 16 April 1944, subject "Influenza".

2. Surgeons of major commands will take every step to effect the early detection of the influenza virus in their area. They will ensure the taking of blood specimens as directed in par 3i below and will expedite the delivery of these specimens to the Fourth Medical (Theater) Laboratory in the shortest possible time. Careful records will be kept by the treating unit and also by major commands of the bloods submitted for study and of the results of tests on these bloods.

3. Close liaison will be maintained with Military Government Health Officers as to the incidence of influenza-like conditions among German civilians. In certain instances it may be desirable to run samples of blood specimens from suspected influenza cases in German civilians. Such will be done only upon agreement with responsible Military Government Health Officers.

a. Recognition of the disease. "Influenza is a respiratory disease which occurs sporadically and in epidemics, varying in severity and extent, and spreading rapidly throughout the population. The diagnosis should not be reserved for highly fatal pandemics nor used indiscriminately for all upper respiratory infections: The onset of illness is abrupt with fever, bodily aches, chilliness or chills, naso-pharyngeal irritation, mild cough and prostration out of proportion to the physical findings. Severe sore throat or coryza comparable to that of the common cold are uncommon. The leukocyte count is normal or decreased. Fever in uncomplicated cases lasts, on the average, from 3 to 5 days, and recovery, except for convalescent weakness, is prompt". Pneumonitis occasionally occurs in the uncomplicated disease. Frank pneumonia varies in incidence in different out-



breaks, is commonly associated with secondary bacterial infection, and is suggested by persistence or sudden return of fever. "Rapidly fatal cases are not the rule. Subclinical infection is frequent. The disease can be transmitted from sputum or nasopharyngeal washings of patients to ferrets, mice and certain other experimental animals, as well as to the chick embryo. Serological tests (neutralization, complement fixation, red cell agglutination) with serum of the same patient in acute and convalescent stages of the disease can be used for identification."

b. "Etiological agent. A virus, two distinct types, A and B, have been identified. The virus of swine influenza is serologically related to type A human virus".

c. "Source of infection. Nasopharyngeal discharges or sputum of infected individuals".

d. "Mode of Transmission. Transfer of respiratory discharges of infected individuals directly to the respiratory tract of susceptibles; by direct contact through contaminated articles, and possibly, in crowded quarters, by air containing infected droplet nuclei".

e. "Incubation period One to three days".

f. "Period of communicability. Probably prior to clinical onset and 7 to 10 days thereafter".

g. "Susceptibility and immunity. Susceptibility is most marked in children and young adults, but is present in all age groups. In different epidemics the incidence varies from 15 to 50 percent of the population. The question of immunity is complicated by the fact that strains of the virus belonging to one type differ, and immunity to virus of type A does not protect against type B. Different attacks can be produced, therefore, by different viruses. Immunity to the homologous virus probably persists for a year at least".

h. "Recognition of disease and reporting. "Medical Officers should make every effort to secure early and accurate diagnosis and reporting of epidemic influenza". Reference is made to Cir Ltr #73, Office of the Theater Chief Surgeon, 18 October 1945, subject, "Reporting of Certain Communicable Diseases". This provides for the immediate reporting of outbreaks of common respiratory disease or influenza-like infections. It also provides for close liaison with Military Government Health Officers in the occupied areas and with civilian health officials in the United Kingdom and liberated countries where U.S. troops are stationed to insure prompt interchange of information as to incidence of communicable disease in troops and civilians. Whenever the presence of influenza virus is confirmed by laboratory study and actual epidemic conditions pertain, major command headquarters and the Theater Chief Surgeon's Office will be notified by the quickest possible means.

i. Laboratory diagnosis.

(1) Infections caused by the viruses of Influenza A and Influenza B are readily diagnosed by demonstrating a significant rise



in specific antibodies in patients serum during convalescence. Facilities are now available in this theater for such studies and it is desired that serum specimens be submitted from suspected cases of influenza, from borderline cases, and from cases of current respiratory disease whether or not they constitute part of an outbreak. Serum specimens should be submitted on all suspected cases, except in the event of an outbreak, when only a representative sample is required. Antibodies against Influenza A and B are normally present at all times in sera of human beings. The titer of these immune substances varies from person to person and from time to time in the same individual. Antibody levels are elevated by vaccination and decline gradually. The rise in antibody level which occurs following infections with the influenza viruses takes place rapidly; the peak may be reached in 7 to 10 days after onset of symptoms. Results of diagnostic importance depend on the demonstration of at least a four-fold rise in antibody titer during convalescence.

(2) Acute and convalescent specimens required for laboratory diagnosis should each consist preferably of approximately 4 cc of sterile serum, although 10 cc of aseptically collected blood is acceptable. The blood should be permitted to clot at room temperature to permit detection of cold agglutinins when indicated. The first, or acute, specimen should be obtained on admission or within four days after onset of symptoms. The second, or convalescent, specimen may be collected on approximately the tenth day after onset, and preferably not later than the fourteenth day. The first specimen should be retained in the refrigerator until the second has been obtained. Both specimens, accompanied by a copy of the attached form ("Etiological Study of Respiratory Disease, with special reference to Influenza"), completed, will be forwarded to the Fourth Medical Laboratory, APO 758, Darmstadt, Germany, (Tel: Darmstadt 275 cc 285). The serum specimens should be shipped in sterile screw-capped vials or other suitable leak-proof sterile containers. The specimens are to be identified by name of patient and date of collection. In the event of transfer of the patient before collection of the second specimen, the first specimen should accompany the patient, and date of same recorded on WD AGO Form No. 8-27 (old WD MD Form 52c). Close cooperation must be maintained between the dispensaries and hospitals in this matter. Determination of influenza antibodies on single specimens are of no diagnostic value and will not be performed.

j. Treatment. Since there is at present no specific immunologic or chemotherapeutic agent of value in the treatment of uncomplicated influenza, therapy of the disease must be symptomatic. Fortunately influenza per se is rarely a cause of death and the complications, which are serious, are now susceptible of attack. The principal cause of death during the pandemic of the last war was pneumococcal and hemolytic streptococcal pneumonia. Hence patients with influenza must be protected against cross infections (see par 3k (1). Signs of bacterial pneumonias must be carefully watched for and penicillin or sulfonamide therapy instituted immediately if they appear. Since these agents do not favorably affect influenza itself, they are not recommended routinely in the treatment of the disease. However, their use prophylactically should be considered in extremely sick or debilitated influenza patients



who may be more than usually susceptible to complicating bacterial pneumonia. For this purpose, 20,000 units of penicillin intramuscularly every 3 hours should be ample over a period of several days. In the case of sulfonamides used for the same purpose, 1 gram of sulfadiazine every 4 hours for 10 or more doses should suffice.

k. Methods of Control

(1) "Isolation. The patient should be isolated during the acute phase of the disease and in early convalescence. It is important to protect patients and early convalescents from secondary bacterial infection through contact with infected individuals particularly in the presence of a high incidence of bacterial complications. For this purpose, attendants and others in contact with patients, may be masked, using a face mask preferably with a flannel filler".

(2) "Physical Inspection. During epidemic periods, unit medical officers should by frequent inspections maintain close surveillance of the troops. Suspects and incipient cases should be promptly isolated in a hospital. This measure tends to delay the spread of the disease and also reduces the risk of secondary bacterial infection".

(3) "Elimination of overcrowding, excessive fatigue and exposure to elements. In the presence of an epidemic, unnecessary congregation in mess halls, recreation centers, or barracks should be eliminated and the maximum possible floor and cubic space per man provided. When the weather permits, tentage should be utilized, if necessary, to provide adequate floor space. Ventilation of barracks, squad rooms, mess halls, and places of assembly should be supervised closely by unit commanders." Sweeping and cleaning should be done when quarters are empty. Prior to sweeping, floors should be liberally sprinkled with water or suitable sweeping compound if available. "New or unseasoned troops should be segregated and transfer of troops to and from infected camps should not be permitted except for military necessity. The transport by train or transport of bodies of troops infected with influenza is particularly hazardous. Their close association under such conditions will result in the infection of many who would otherwise escape and in a high incidence of complications and deaths which otherwise might be avoided". Every possible effort should be made to reduce excessive fatigue and exposure to the elements.

(4) "Mess Sanitation. The greatest care should be taken to insure the proper sterilization of dishes and other utensils which may have been contaminated by respiratory discharges".

(5) "Personal Hygiene. Indirect infection by soiled hands and handkerchiefs, or by towels used in common, should be avoided. Special instruction should be given in personal cleanliness, especially in respect to spitting and the covering of coughs and sneezes. Frequent washing of hands should be stressed. Wash basins contaminated by washings from the mouth and nose are considered to be particularly dangerous. Whenever possible, the hands and face should be washed in water flowing directly from the tap and not in water collected in a contaminated basin".



(6) "Quarantine. Should be restricted to situations in which there is clear-cut localization of the infection to certain units or areas".

(7) "Concurrent disinfection. Discharges from nose and throat of patient."

(8) Immunization. All U.S. Army troops are being currently vaccinated against influenza. Available evidence indicates that it should be of much benefit. Vaccination, however, will in no way obviate the necessity for assiduous application of other measures or procedures outlined above.

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# ETIOLOGICAL STUDY OF RESPIRATORY DISEASE

## WITH SPECIAL REFERENCE TO INFLUENZA \*

(Patient's Name)	(ASN)	(Organization)
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(Hospital)	Date of Admission	Date of Onset of Illness
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### CLINICAL DATA (Indicate severity by 0 to 4+)

#### SYMPTOMS ON ADMISSION:

Onset - sudden (    ); gradual (    )

<u>A. Systemic</u>	<u>B. Respiratory</u>	<u>C. Gastro-Intestinal</u>
Chilliness (    )	Nasal irritation (    )	Nausea (    )
Malaise (    )	Post-nasal discharge (    )	Vomiting (    )
Weakness (    )	Throat irritation (    )	Diarrhea (    )
Dizziness (    )	Pain on swallowing (    )	Abdominal pain (    )
Headache (    )	Cough (    ) Productive (    )	<u>D. Other</u>
Orbital pain (    )	Sputum (    ) Bloody (    )	
Muscular Aches (    )	Chest pain (    )	
	Retrosternal (    )	
	Pleuritic (    )	

#### PHYSICAL FINDINGS ON ADMISSION:

Temperature - .....

<u>A. Systemic</u>	<u>C. Nasopharyngeal</u>
Prostration (    )	Nasal congestion (    ); discharge (    )
Lymphadenitis	Sinus tenderness (    )
Cervical (    )	
General (    )	Pharyngeal mucosa, Normal (    ) or,
	Dry (    ); Red (    )
Muscle Tenderness (    )	Injected vessels (    )
	Prominent lymphoid tissue (    )
	Post-nasal exudate (    )
	Pharyng. or tonsil. follic. (    )
	Pharyngeal exudate (    )

B. Chest

Normal (    )

Abnormal findings (describe)

#### CLINICAL IMPRESSION:

#### TEMPERATURE RECORD:

Hospital day

1    2    3    4    5    6    7    8    9    10

Max. temp. :

Min. temp.



CLINICAL LABORATORY DATA:

LEUCOCYTE COUNT:  
(Preferably on admission)

Date \_\_\_\_\_  
WBC \_\_\_\_\_

THROAT CULTURE:  
(Preferably on admission)

<u>Date</u>	<u>Result</u>
_____	_____
_____	_____
_____	_____

CHEST X-RAY

<u>Date</u>	<u>Result</u>
_____	_____
_____	_____
_____	_____

DATA FOR VIRUS STUDIES:

	<u>Date</u>
Influenza vaccination	_____
( First or acute phase blood sample	_____
( Second or convalescent phase blood sample	_____

RESULTS OF SPECIAL VIRUS STUDIES

(Entries to be made by receiving laboratory)

<u>Influenza A</u>	<u>Influenza B</u>	<u>Cold Auto-hemagglutinins</u>	<u>Other</u>
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\* Completed copy of this form will be sent with blood specimens forwarded to the Fourth Medical Laboratory, Darmstadt, Germany, APO 758.  
(Tel: Darmstadt 275 or 285).